REMARKS

Claims 1-4 are pending.

Claim Rejections -- 35 U.S.C. 103(a)

Applicants respectfully traverse the obviousness rejection of claims 1-4 over U.S. Patent No. 6,046,119 to Kaibe.

The claims are directed toward a moisture-permeable waterproof fabric. Some of the common features of the claimed invention are that the fabric comprises:

(1) a base fabric;

(2) a moisture-permeable resin layer on one side of the base fabric, wherein the moisture-permeable resin layer comprises a non-porous urethane resin film; and

(3) a surface protective resin on the moisture-permeable resin layer, wherein the surface protective resin contains a hydrophilic urethane resin and high moisture-absorbing/releasing and heat-generating organic fine particles.

In contrast, Kaibe merely discloses a heat-retaining, moisture-permeable, waterproof fabric having two or three layers with overcoat layer (c) being optional (see Abstract; column 1, line 66 to column 2, line 15; column 3, lines 34-36 and 52-56):

(a) a base fabric;

(b) highly moisture-absorbing/releasing and hygroscopically heat-generating organic fine particles immobilized with a moisture-permeable resin as an adhesive coating at least one surface of the base fabric; and

(c) optionally an overcoat of a resin which is free of the highly moisture-absorbing/releasing organic fine particles, wherein **the resin in the overcoat has a lower moisture permeability than the underlying moisture-permeable resin of layer (b)**.

The main goal of the fabric of Kaibe is to make a fabric that positively utilizes the heat generated by absorption of moisture and, at the same time, that reduces moisture trapped within the clothing (column 1, lines 13, 14, 41-44; 61-67; column 2, lines 1-9). The goal of Kaibe is achieved by using the highly moisture-absorbing/releasing and hygroscopically heat-generating organic fine particles, which can absorb moisture and emit heat upon the absorption of moisture, in the organic-fine-particle+moisture-permeable-resin layer (b)

mentioned above (column 4, lines 1-4, 14 and 15). According to Kaibe, the optional overcoat (c) is added to the heat-retaining and moisture-permeable fabric in order to extend the duration of heat generation by the organic fine particles upon moisture absorption (column 3, lines 52-56). Because the overcoat (c) of resin has a lower moisture permeability than the moisture-permeable resin of layer (b), the presence of the overcoat (c) will slow the permeation of moisture through the fabric, so that the organic fine particles in layer (b) come in contact with the moisture for a longer period of time and thus resulting in lengthened duration of heat generation.

The heat-retaining and moisture-permeable fabric of Kaibe differs from the fabrics of claims 1-4 at least in that the overcoat (c) of Kaibe contains no highly moisture-absorbing/releasing and hygroscopically heat-generating organic fine particles. The Examiner concedes that the difference between Kaibe and the claimed fabrics exists. However, the Examiner alleged that it would have been obvious to rearrange the organic-fine-particle+moisture-permeable-resin layer (b) with the overcoat layer (c) in the heat-retaining and moisture-permeable fabric of Kaibe, so that the "overcoat layer (c)" is in between the base fabric (a) and the organic-fine-particle+moisture-permeable-resin layer (b) to arrive at the fabrics of claims 1-4. Applicants respectfully disagree.

The Examiner tried to support her obviousness rejection by citing *In re Japikse*, 86 USPQ 70, for the proposition that "it has been held that rearranging parts of an invention involves only routine skill in the art." In reading the court opinion in *In re Japikse*, applicants failed to find the holding, "rearranging parts of an invention involves only routine skill in the art." The court in *In re Japikse* merely held that moving the position of a switch in a prior art device was unpatentable. See 86 USPQ 70, 73 (CCPA 1950). The facts in the present case are different from that in *In re Japikse*. In the present case, the Examiner was merely not talking about moving the position of something in the heat-retaining and moisture-permeable fabric of Kaibe. Instead, the Examiner was talking about switching the orders of the layers in the heat-retaining and moisture-permeable fabric of Kaibe to arrive at the fabrics of claims 1-4. The switch that the Examiner alleged to be obvious involves changing not only the positions of two layers of the heat-retaining and moisture-permeable fabric of Kaibe, but the physical relationship of all three layers of the heat-retaining and moisture-permeable fabric of Kaibe would be altered. Applicants contend that the holding in

In re Japikse could not be stretched to extend this far. This is one of the reasons why claims 1-4 should not have been rejected as obvious over Kaibe.

The second reason why claims 1-4 should not have been rejected as obvious over Kaibe is that the prior art provides no suggestion or motivation to do the switch of the organic-fine-particle+moisture-permeable-resin layer (b) and the overcoat (c) in the heat-retaining and moisture-permeable fabric of Kaibe as urged by the Examiner. The opinion of *In re Japikse* relied upon by the Examiner for her obviousness rejection was rendered by a court in **1950**. However, more recent case law emphasizes the importance of a suggestion or motivation coming from the prior art for modifying a prior art device to arrive at a claimed device for a holding of *prima facie* obviousness. See, e.g., *In re Kotzab*, 55 USPQ2d 1313 (Fed. Cir. 2000); *In re Fritch*, 23 USPQ2d 1780 (Fed. Cir. 1992); MPEP 2143.01. Kaibe is totally silent on any suggestion or desirability of switching the physical relationship of the organic-fine-particle+moisture-permeable-resin layer (b) and the overcoat (c).

The Examiner alleged that the switch of the layer (b) and the overcoat (c) in the fabric of Kaibe is "motivated by the desire to increase the moisture-absorbing/releasing and the heat-generating properties of the composition" in order to arrive at the claimed invention. However, the motivation alleged by the Examiner could not be found in the prior art. The Examiner did not explain how a person of ordinary skill in the art would know that switching the physical relationship of the organic-fine-particle+moisture-permeable-resin layer (b) and the overcoat (c) in the heat-retaining and moisture-permeable fabric of Kaibe can meet "the desire to increase the moisture-absorbing/releasing and the heat-generating properties of the composition." Without a reasonable expectation of success, the modification of the heat-retaining and moisture-permeable fabric of Kaibe as urged by the Examiner would not have been obvious. See *In re Ochiai*, 37 USPQ2d 1127 (Fed. Cir. 1995); *Amgen, Inc. v. Chugai Pharmaceutical Co.*, 18 USPQ2d 1016 (Fed. Cir. 1991); MPEP 2143.02.

The motivation alleged by the Examiner also does not make sense. Below, applicants will discuss the three parts of the motivation separately: (i) the desire to increase the moisture-releasing properties of the fabric; (ii) the desire to increase the moisture releasing properties of the fabric; and (iii) the desire to increase the heat-generating properties of the fabric.

Based on the disclosure of Kaibe, the person of ordinary skill in the art would not have reasonably predicted that switching the physical relationship of the layer (b) and the overcoat (c) in the heat-retaining and moisture-permeable fabric of Kaibe can increase the moisture-absorbing/releasing properties of the fabric. This is because the moisture releasing property of the fabric of Kaibe is achieved by using moisture-permeable resin. Since Kaibe requires that the moisture permeability of the resin in the overcoat (c) be less than that of the resin in the organic-fine-particle+moisture-permeable-resin layer (b), switching the layer (b) with the overcoat (c) would not increase the moisture-absorbing/releasing properties of the fabric. This can be explained further with a hypothetical. Suppose a person wears a cloth made of one square meter of the heat-retaining and moisture-permeable fabric of Kaibe, wherein the resin in the layer (b) has a moisture permeability of 70 $g/m^2.hr$, and the resin in the overcoat (c) has a moisture permeability of 30 $g/m^2.hr$. Suppose the person generates 100 g of perspiration in one hour. The resin in the layer (b) will let 70 g of moisture pass away from the body in one hour, and the resin in the overcoat (c) will let 30 g of the 70 g moisture exit in one hour, so the net amount of moisture release is 30 g per hour with the unmodified fabric of Kaibe. Now let's switch layer (b) with the overcoat (c) in the fabric of Kaibe to make a modified fabric as alleged by the Examiner. In the modified fabric of Kaibe, the resin in the now intermediate "overcoat (c)" will let 30 g of moisture of the 100 g perspiration pass away from the body in one hour, and the resin in the now outer layer (b) will let the entire 30 g moisture pass in one hour, so that the net amount of moisture release is 30 g per hour in the modified fabric of Kaibe. This shows that modifying the fabric of Kaibe as put forth by the Examiner would not increase the moisture-release property of the fabric as alleged by the Examiner.

The moisture-absorbing property of the fabric of Kaibe is primarily achieved by the hydroscopic organic fine particles in the layer (b) (column 4, lines 11-12). In the unmodified fabric of Kaibe, the organic fine particles in the layer (b) are exposed to 70 g of moisture per hour in the above hypothetical. In contrast, in the modified fabric of Kaibe as alleged by the Examiner, the organic fine particles in the now outer layer (b) are exposed to only 30 g of moisture per hour in the above hypothetical. Thus, by the simple fact that the organic fine particles in the layer (b) are exposed to more moisture in the unmodified fabric than in the

modified fabric, the unmodified fabric should be able to absorb more moisture than the modified fabric.

The heat-generating property of the heat-retaining and moisture-permeable fabric of Kaibe is achieved by the organic fine particles absorbing moisture (column 4, lines 14-15). As discussed above, the organic fine particles in the layer (b) are exposed to more moisture in the unmodified fabric of Kaibe than in the modified fabric. Therefore, the unmodified heat-retaining and moisture-permeable fabric of Kaibe should be able to generate more heat than the modified fabric of Kaibe.

Thus, one of ordinary skill in the art would have reasonably predicted that the motivation for the modification of the heat-retaining and moisture-permeable fabric of Kaibe put forth by the Examiner will not materialize. As a result, one of ordinary skill in the art would not have been motivated to modify the heat-retaining and moisture-permeable fabric of Kaibe as alleged by the Examiner. This is another reason why claims 1-4 should not have been rejected as obvious over Kaibe.

The fact that the heat-retaining and moisture-permeable fabric of Kaibe could be modified by switching the layer (b) and the overcoat (c) does not, by itself, render obvious the fabrics of claims 1-4. This is also another reason why claims 1-4 should not have been rejected as obvious over Kaibe.

Applicants note that Kaibe teaches putting the overcoat (c) on top of the layer (b) in order to extend the duration of heat generation, wherein the resin in the overcoat (c) has a lower moisture permeability than the resin in the layer (b) (column 3, lines 52-56; Tables 6 and 8; Examples 14 and 15 in comparison with Examples 7 and 9). With this reasoning of Kaibe for having the overcoat (c) on the outside of the layer (b) in the heat-retaining and moisture-permeable fabric, the disclosure of Kaibe is incompatible with the modification of the heat-retaining and moisture-permeable fabric of Kaibe by switching the layer (b) and the overcoat (c) as alleged by the Examiner. This is yet another reason why claims 1-4 should not have been rejected as obvious over Kaibe.

In the unmodified heat-retaining and moisture-permeable fabric of Kaibe, since the resin in the overcoat (c) has a lower moisture permeability than the resin in the layer (b) (column 3, lines 52-56), it could be argued that modifying the heat-retaining and moisture-permeable fabric of Kaibe by placing the "overcoat (c)" in between the base fabric and the

organic-fine-particle+moisture-permeable-resin layer (b) could be disadvantageous because it would be difficult to prevent sweaty condition. Therefore, one of ordinary skill in the art would not have been motivated to modify the heat-retaining and moisture-permeable fabric of Kaibe to arrive at the claimed fabric. This is an additional reason why claims 1-4 should not have been rejected as obvious over Kaibe.

Without valid motivation, applicants submit that the obviousness rejection over Kaibe was made in hindsight based on the disclosure of the claimed invention in the application. Obviousness rejections should not be based on hindsight. *In re Jones*, 21 USPQ2d 1941 (Fed. Cir. 1992); MPEP 2143.01. This is a further reason why claims 1-4 should not have been rejected as obvious over Kaibe.

Applicants also note that the organic fine particles in the unmodified heat-retaining and moisture-permeable fabric of Kaibe are directly immobilized on the base fabric with a moisture-permeable resin. This indicates that Kaibe fails to recognize one of the problems solved by the claimed invention. The claimed invention is designed to solve at least the problem of the deterioration of the moisture-absorbing/releasing and heat-generating properties and the texture of the fabric caused by the penetration of the organic fine particles into gaps between the fibers of the basic fabric. Applicants submit that solving this problem by putting the organic fine particles in the surface protective resin is one of the unexpected results of the claimed invention.

Withdrawal of the obviousness rejection is requested.

CONCLUSION

With the above reasoning, applicants submit that the application is in a condition for allowance and an early and favorable action to that effect is requested.

The Examiner is invited to contact, if necessary, the undersigned at (202) 220-4200 to discuss any matter concerning this application in order to expedite the prosecution.

In the event that this paper is deemed not timely, applicants petition for an appropriate extension of time. The Office is hereby authorized to charge any fees under 37 C.F.R. § 1.16 or § 1.17 or credit any overpayment to Deposit Account No. 11-0600, referencing Docket No. 10612/4.

Respectfully submitted,

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